focus

Main program.

[calls: al00aa, rwsurf, surface, rdknot, rdcoil, restart, setdof, knotxx, oculus:pp00aa.]

contents

1.1 tem

This is for temperary using. I will rewrite the whole document someday in the future.
2016/08/04; write down the coordinate used in the code. The θ direction is clockwise. Be careful with this. I will add a subroutine in rdcoils to test if the coils file is using the same coordinate.

1.2 overview

1. First, al00aa is called to read the input file.

2a. If `Itopology` $= 0$, construct unknotatrons; the winding surface and plasma boundary are determined by rwsurf and surface.

2b. If `Itopology` $= 1$, construct arbitrary-knotatrons; rdknot is called to determine the knot;

3. Then, the geometry of the coils are read from file, rdcoil.

4. If `Loptimize` $\neq 0$, then

   i. the coil degrees-of-freedom are assigned by setdof;

   ii. the coil optimization proceeds using NAG:E04JYF, which iteratively calls ofunct.

5. If `Lpoincare` $\neq 0$, then

   i. a Poincaré plot is constructed using oculus:pp00aa.

   ii. if `Lpoincare=2`, input information for free-boundary SPEC vacuum verfication calculation is provided by oculus:bn00aa;

1.3 Oculus

1. Subroutines from the Oculus library are used, see e.g. oculus:bs00aa and oculus:pp00aa.